



**Intellectual disability in Irish prisoners; systematic review  
of prevalence**

Journal:	<i>International Journal of Prisoner Health</i>
Manuscript ID	IJPH-01-2017-0003.R2
Manuscript Type:	Research Paper
Keywords:	Learning Disability, Intellectual Disability, Prison, Ireland, Cognitive Disability, Forensic Mental Health

SCHOLARONE™  
Manuscripts

**Intellectual disability in Irish prisoners; systematic review of prevalence**

**Abstract**

**Purpose**

While individuals with an intellectual disability form a significant minority in the worldwide prison population, their healthcare needs require specialist attention. In Ireland, services for prisoners with intellectual disabilities need development. However, there is little substantive data estimating prevalence of intellectual disabilities within the Irish prison system.

**Design**

We systematically review published data relating to the prevalence of intellectual disabilities in prisons in the Republic of Ireland. We searched four databases, governmental websites and corresponded with experts.

**Findings**

Little published data were elicited from searches except for one nationwide cross sectional survey which reflected a higher prevalence than reported in international studies. Studies from forensic mental health populations are narrated to contextualize findings.

**Value**

This study found that there is little data to accurately estimate the prevalence of intellectual disabilities in the Irish prison system and the limited data available suggests that this is likely to be higher than international estimates. We highlight the need for further research to accurately estimate prevalence in this jurisdiction, alongside the need to develop screening and care pathways for prisoners with an intellectual disability.

## Key words

Prisons, Prisoners, Intellectual Disability, Learning Disability, Mental Retardation, Ireland, Forensic Mental Health, Mental Health, Cognitive Disability

## Introduction

The prevalence of Intellectual disabilities in Ireland is 6.13 per 1,000 population. This is based on National Intellectual Disability Database (NIDD) data from 2015 and population census data from 2011. The prevalence rate for mild intellectual disability is 1.99 per 1,000 while the rate for moderate, severe or profound intellectual disability is 3.59 per 1,000 (Doyle & Crew, 2016).

Considerable confusion exists worldwide over the appropriate use of terms such as mental handicap, learning disability, mental retardation and intellectual disability. These are terms derived variously from current or superceded legislation in various jurisdictions and nosological terms from various international classifications. The term “developmental disorder” also has medical currency. Whilst “pervasive developmental disorder” is often used for autistic spectrum disorder, “global developmental delay” is used for intellectual disability. For this study, we use the terms mental handicap, learning disability, mental retardation, intellectual disability interchangeably but specified as necessary where defined based on a diagnostic classification or when used in a study.

“Learning disability” is the term commonly used in the United Kingdom, whereas this term is more used to describe those with specific learning difficulties in the United States (U.S.).

“Mental Handicap”, a terminology used in the late 20th Century has now been phased out due to pejorative connotations but has been included in the study strategy to avoid publication bias. “Mental Retardation” is a term used in The International Classification of

Diseases, 10th Edition (World Health Organization, 1992) and “Intellectual Disability” is used in Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (American Psychiatric Association, 2013). “Cognitive Disability” used in U.S. surveys (Bronson & Berzofsky, 2015) includes intellectual disabilities, autism, dementia and traumatic brain injury. Preferred terminology in contemporary literature would support the use of “Intellectual Disabilities” (Fazel et al, 2008; Hellenbach et al, 2017).

A diagnosis of intellectual disability is typically made if an individual meets three criteria: firstly, a score below 2 standard deviations from the mean on a validated test of intelligence, secondly, evidence of significant impairments in adaptive functioning relative to same-age peers and finally, a developmental history suggesting onset of difficulties before the age of 18 years. The two major diagnostic systems currently in use are the International Classification of Diseases, 10<sup>th</sup> Edition (ICD-10) and the Diagnostic and Statistical Manual of Mental Disorders, 5<sup>th</sup> Edition (DSM-5).

The ICD-10 Diagnostic Criteria (World Health Organization, 1992) state that “*degrees of mental retardation are conventionally estimated by standardized intelligence tests. These can be supplemented by scales assessing social adaptation in a given environment.*”.

The DSM-5 (American Psychiatric Association, 2013) emphasises the need to use both clinical assessment and standardized testing of intelligence when diagnosing intellectual disability, with the severity of impairment based on adaptive functioning rather than IQ test scores alone. By removing IQ test scores from the diagnostic criteria but still including them in the text description of intellectual disability, DSM-5 aimed to remove overemphasis on IQ as the defining factor of a person’s overall ability without considering functioning levels. The

assessment of intelligence across three domains including the conceptual, social and practical domains is highlighted in this classification.

Individuals with intellectual disability form a significant minority in prisons worldwide. Tort et al (2016) found that in a sample of 398 Spanish prisoners, 3.77% of those assessed measured an IQ below 70 (an IQ below 70 is considered part of the criteria for diagnosis of an intellectual disability by international classification systems). Søndena et al (2008) in a random sample of 143 Norwegian prisoners found that the prevalence of intellectual disability (IQ <70) was 10.8%. Hassiotis et al (2011) interviewed 3142 prisoners across 131 prisons in England and Wales, reporting a prevalence of Intellectual Disability (IQ <65) as 4%. A national survey of disabilities by the U.S. Department of Justice (Bronson & Berzofsky, 2015) found that 2 in 10 prisoners and 3 in 10 jail inmates in the U.S. reported a “cognitive disability”, the most common reported disability in each population.

Whilst Tort et al (2016) used the Test of Non-Verbal Intelligence (TONI-2), Søndena et al (2008) used the Hayes Ability Screening Index (HASI) validated with the Wechsler Abbreviated Scale of Intelligence (WASI) and Hassiotis et al (2011) used the Quick Test. The U.S. national survey of disabilities (Bronson & Berzofsky, 2015) used self-report and “cognitive disability” included “Down syndrome, autism, dementia, attention deficit disorder, learning disorders, intellectual disabilities, or traumatic brain injury”. This exemplifies one of the key limitations in interpreting cross-national comparisons of estimates; that is, the differences in methodology used to measure intellectual disability and the differences in cut offs for IQ taken as indicating the presence of an intellectual disability.

A systematic review evaluating 10 surveys from 4 countries dating between 1966-2004 (Fazel, Xenitidis & Powell, 2008) showed that typically 0.5-1.5% (range 0-2.8%) of prisoners were diagnosed with an intellectual disability. Estimates were likely to be conservative given the limited numbers of studies and substantial heterogeneity and, indeed, a more recent systematic review (Hellenbach et al, 2017) reporting four studies published from 2004-2014 noted a higher prevalence estimate of 7-10% worldwide. Hellenbach et al (2017) reported that none of the studies discussed in their paper applied a full clinical assessment of intellectual disability considering both intellectual and adaptive functioning in contrast to the 2008 review by Fazel et al., where included studies used the International Classification of Diseases (ICD) or American Association of Mental Retardation (AAMR) criteria.

Whether intellectually disabled individuals are at higher risk of offending is controversial. Simpson & Hogg (2001) concluded their systematic review of the evidence regarding the association between intellectual disability and offending by commenting that there is ‘no clear evidence that the prevalence of offending among people with a learning disability is higher than for the wider population’. However, there are social theories indicating that although this may be the case, individuals with intellectual disabilities are more likely to be unsuccessful in criminal activities. They are less likely to evade detection or arrest and therefore more likely to be prosecuted. They are also likely to be vulnerable in terms of their rights on arrest such as potentially being unable to understand ‘the right to remain silent’ (Irish College of Psychiatrists, 2005).

Those who have mild intellectual disabilities, but do not have dysmorphic features or physical disabilities, may be less likely to be recognized as having a disability during their criminal justice journey through the courts or on reception into prisons than those who have physical features or disabilities associated with specific syndromes such as Down Syndrome

or Foetal Alcohol Syndrome (Smith et al, 2008). Such “hidden” disabilities could potentially impact prevalence rates disproportionately. Those with comorbid autistic spectrum disorders (ASD) may present as “more able” than would be expected given their IQ. This can be due to the discrepancy between performance and verbal IQ which is a frequent finding for those with ASD.

The Irish College of Psychiatrists (2005), in their publication “People with a Learning Disability who offend: Forgiven but not Forgotten” note the challenges faced by those with intellectual disabilities in contact with the Irish criminal justice system. They note from a nationwide pilot survey, despite a modest response rate, that there were over 400 such individuals in contact with community services and around a quarter of these thought to need urgent forensic psychiatric evaluation. The estimate of prevalence was 9 per 100000 population and variance from 0.5 to 22.5 per 100000. Males (4:1) in the age group of 25-54 years (31%) charged with assault (36%) or indecent exposure (14%), were overrepresented in the surveyed population. This survey also noted that 5 individuals then at the Central Mental Hospital had a diagnosis of intellectual disability (about 4%).

A national survey of offending behavior amongst intellectually disabled mental health service users in Ireland (Leonard, Morrison, Delaney-Warner & Calvert, 2015) noted an over representation of young males. In terms of severity 45% had severe, 41.3% moderate and 13.7% mild intellectual disability. This study found that the most common offence type was assault and the second most common was indecent exposure. Of the 82 most serious offenders, the vast majority were managed by Intellectual Disability Services or General Adult Psychiatry Services.

Secure beds in the Irish Republic are limited to the Central Mental Hospital, Dundrum, offering high and medium secure beds for a national catchment area. Only the Central Mental Hospital is designated under the Criminal Law Insanity Act, 2006, which forms the legal basis for transfer of prisoners. There are no separate specialist secure facilities for intellectually disabled patients in Ireland, although there is recognition of the need for at least two 30 bedded specialist units (Leonard, Morrison, Delaney-Warner & Calvert, 2015). The provision of secure beds is therefore both geographically disparate and substantially lower than other Western European countries.

In this paper, we systematically review published data from prisons in the Irish Republic looking at estimates of prevalence of intellectual disability. This is with a view to establishing need and strengthening the argument for service development and/or policy review.

**Methods**

Studies of the prevalence of intellectual disabilities in Irish prison populations reported between January 1966 and September 2016 were sought by searches of electronic bibliographic databases (MEDLINE, EMBASE, PsycINFO & CINAHL) using combinations of keywords relating to intellectual disabilities (e.g., intellectual disabilities, mentally retarded, learning disabilities, mental retardation) and to prisoners (e.g., inmate, sentenced, remand, detainee, prison\*).

The search strategy was similar to that used for a systematic review and meta-analysis by Fazel, Xenitidis & Powell, 2008. This was supplemented with a review of published article reference lists and computerised searching of governmental and non-governmental sources



(e.g., from the Mental Health Commission & the Irish Prison Reform Trust) as well as contact with experts in intellectual disabilities.

Studies were included if all the following were met: (a) presented data on the prevalence of intellectual disabilities; (b) sampled from detainees or sentenced prisoners; (c) used validated instruments for measuring intelligence and/or clinical examination of individual subjects; and (d) presented quantitative findings.

For each eligible study, the following were extracted: year of interview; number of prisoners interviewed; diagnostic instrument(s) criteria and number diagnosed with intellectual disabilities. We provide a narrative review based on the lack of published data we found.

## Results

No individual published study identified from database searches met the inclusion criteria. One governmental report with data meeting the inclusion criteria was identified from the website of the Irish Prison Reform Trust. Three studies from database search and one study identified through correspondence with experts detailed diagnoses of intellectual disability in forensic mental health subpopulations. Table 1 summarises the study included and those excluded but narrated for contextual purposes.

Table 1. Studies Described (only the first study met inclusion criteria)

First Author	Date	Criteria for Diagnosis	Sample size	%Male	Sentenced / Remand	Prevalence
Murphy, M	2000	KBIT, WRAT, Vocabulary subtest from WAIS-R, NAPS	264	96	Mixed	28.80% in a sample of prisoners
Linehan, S	2002	ICD 10	352	43	Sentenced	4.34% of those admitted to the Central Mental Hospital
O'Connor, A	1990	Not specified	627	100	Mixed	4% of those admitted to the Central Mental Hospital
Giblin, Y	2012	ICD 10	96	100	Sentenced	4% of those in a high support prison unit
O'Neill, C	2016	ICD 10	917 individuals / 1109 remand episodes	100	Remand	1.3 % of those offered a full psychiatric assessment in a remand prison

We found no single published study evaluating a nationwide cross sectional survey of prevalence through a search of databases.

The only country wide cross sectional survey was not elicited by database search, but rather through a search of the website of the Irish Prison Reform Trust. Commissioned by the Department of Justice, Equality and Law Reform of the Irish Government in 1999, Murphy, Harold, Carey & Mulrooney (2000) completed psychological assessment on 264 prisoners (255 male, 9 female) which represented 10% of the contemporaneous Irish prisoner population identified through a random selection across 14 Irish prisons. Assessments included the Kaufman Brief Intelligence Test (KBIT), the Wide Range Achievement Test, the Vocabulary sub test from the Weschler Adult Intelligence Scale- Revised, and the National Adult Prisoner Survey. These tests were administered by psychologists and measured intelligence and academic ability. Results showed that 28.8% of the sample population scored below 70 on the KBIT, which was suggestive of a “significant degree of intellectual disability/mental handicap”. Results from other tests were consistent with those of the KBIT.

Four of the published studies included only individuals who were in contact with forensic mental health services and so did not record prevalence estimates in the general prison population. The findings of these were notable for contextual purposes.

O'Connor & O'Neill (1990) studied male prison transfers to the Central Mental Hospital between 1983-1988. The recorded number of admissions was 627. “Mental Handicap” was recorded in 24 patients (4%). The mean length of stay for those with a ‘Mental Handicap’ was noted to be 6 weeks and 38% of these were remand prisoners who had been transferred to hospital. 41% (10/24) were charged with either Murder or an offence against the person.

The authors noted that “a large number had other categories of psychiatric disorder and their low intelligence was the least important.” They found that 58% of their sample had an affective or psychotic illness. This publication does not specify the criteria used for diagnosis of ‘Mental Handicap’. The study did not meet inclusion criteria as it did not relate to the general prison population.

Linehan et al (2002) studying the needs of Irish travellers, analysed a computerised case register of all admissions to the Central Mental Hospital for the three years 1997-1999. During that time, all transfers from the prison to hospital were made to the Central Mental Hospital in the first instance. There were 476 admissions of 352 individuals and the travelling community was overrepresented in these admissions. The table presenting the diagnostic clusters makes reference to 484 admissions, out of which 21 (4.34 %) had a diagnosis of an intellectual disability. The authors also noted that 21.4% of travelers admitted to the Central Mental Hospital were diagnosed with an intellectual disability as compared to 3.4% of those with White European ethnicity. There was no individual with an intellectual disability identified from the Black and Minority ethnic group. Diagnoses were based on the International Classification of Diseases, 10<sup>th</sup> Edition. This study did not meet inclusion criteria as it did not relate to the general prison population.

Giblin et al (2012) demonstrated reduction in the use of seclusion within a large Irish prison following the setting up of a 10 bedded ‘High Support Unit’ at Mountjoy prison, a prison for sentenced offenders with a capacity of 630. The purpose of the unit was to enhance care for prisoners identified as having substantial mental health needs or those at risk of self-harm. They noted that through the duration of their study 96 patients were admitted to the High Support Unit (HSU). They noted that 29% of these admissions were diagnosed with a major

1  
2  
3 mental illness, 7% with a personality disorder and 4% of patients who required admission to  
4 the HSU had an intellectual disability. Diagnoses were made through clinical interview based  
5 on the International Classification of Diseases, 10<sup>th</sup> Edition (ICD-10). This study did not meet  
6 inclusion criteria as it did not relate to the general prison population.  
7  
8  
9  
10

11  
12  
13 Correspondence with experts identified one additional paper (O'Neill et al, 2016) looking at  
14 data from 3 years of assessments (6177 remands, 917 individuals assessed, all male) by the  
15 PICLS (Prison Inreach and Court Liaison Service) at Cloverhill Prison, the largest remand  
16 prison in Ireland. They noted a discharge diagnosis of 'Mental Retardation' (F70-79,  
17 International Classification of Diseases, 10<sup>th</sup> Edition) in 1.3% of those who received a full  
18 psychiatric assessment by the PICLS team (n=14/1109). ICD-10 diagnoses were recorded  
19 following assessment based on clinical interviews and review of past medical and psychiatric  
20 case records from prison and community sources. There is little information identifiable on  
21 the specific outcomes for those diagnosed with 'Mental Retardation'. Another way of looking  
22 at the results of this study would be that 0.2 % (14/6177) of those committed to this prison  
23 over the study period were eventually diagnosed with Mental Retardation. As the initial  
24 screening by general nurses at the prison does not include specific screening for intellectual  
25 disability, this would need to be contextualized with caution.  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42

### 43 **Discussion and Conclusions**

44  
45  
46 We describe a systematic review evaluating the prevalence of intellectual disabilities in  
47 prisons within the Irish republic. The significant limitation of our review is that only one  
48 study met the inclusion criteria; we therefore narrate four additional studies that indirectly  
49 relate to the question but were not eligible for inclusion.  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Our review found that there was only one cross sectional survey (Murphy, Harold, Carey & Mulrooney, 2000) that estimated nationwide prevalence in a prison setting. This survey showed a substantially higher prevalence (28%) of “significant intellectual disability” in Irish prisons when compared with international estimates of 1.5% (Fazel, Xenitidis & Powell, 2008) and 7-10% (Hellenbach et al, 2017). The strength of the study was cross-sectional sampling from fourteen national prisons. However, the major limitation of the Murphy et al (2000) study was the lack of standardized tests of functional performance. They use KBIT (Kaufman & Kaufman, 2004) as the primary assessment tool; this is a brief, individually administered measure of verbal and non-verbal intelligence. They correlated results with the WRAT (Jastak & Wilkinson, 1984) and the vocabulary subtest of the WAIS-R (Wechsler, 1981) and the NAPS (National Adult Prisoner Survey). The National Adult Prison Survey (NAPS) was an individually administered questionnaire developed specifically for their study, to elicit social functioning indicators from respondents regarding their demographic status, educational history, work skills, employment record and leisure activities. This was, therefore, not a standardized or research validated tool measuring adaptive functioning. As such, it is difficult to know what proportion of those identified would meet the diagnostic threshold for Mental Retardation or Intellectual Disability as defined in an accepted clinical diagnostic manual such as the ICD-10 or DSM-5 and may point to a potential overestimation in the reported prevalence of 28%, which is higher than international studies. Best practice in the diagnosis of intellectual disabilities places an emphasis on the need to use both clinical assessment and standardized testing of intelligence when diagnosing intellectual disability, with the severity of impairment based on adaptive functioning across conceptual, social and practical domains (British Psychological Society, 2015).

Interestingly, all the studies that looked at forensic mental health subpopulations arrived at approximately the same prevalence of intellectual disability (4%) within the respective

subpopulation. It is perhaps not surprising that the prevalence of intellectual disability in this 'high need' group is greater than the 0.5-1.5% prevalence of intellectual disability in general prison populations found in the Fazel et al review (2008).

O'Neill et al. (2016) looked at people already identified as having potential health needs (and consequently referred to an inreach and court liaison service), and identified an estimate of 1.3% of those assessed by the psychiatric team or 0.2% of all committals. However, no specific screening for intellectual disability was included for each committal and, as a result, the latter figure is likely to be an underestimate.

It is accepted that reliable studies of intellectual disabilities in prison populations are rare (Duffy, Linehan & Kennedy, 2003) and our review illustrates this finding.

Our study indicates the need for a nationwide cross sectional survey using validated diagnostic systems to define contemporaneous need, so that services can be developed and national policy can be better informed. There would be additional value in such a study specifying prevalence rates of specific diagnoses such as foetal alcohol syndrome and Down syndrome. It would also be valuable to identify prevalence of "hidden disabilities", where the individual's disability only became clear over time or through testing. Such individuals are at a considerable disadvantage as their disability is not immediately identifiable; they often underperform in tasks they are asked to complete and struggle with social interaction, both of which may result in the individual being judged more harshly than they would have been if their disability were more obvious.

If a more contemporaneous systematic prevalence study replicates the findings of the survey in 2000 (Murphy, Harold, Carey & Mulrooney, 2000), it may be indicative of a need for

effective screening within prisons, as well as a need to reflect on policing and/or prosecution to allow for early identification of significant intellectual disabilities prior to incarceration.

Current screening mechanisms on reception to prison focus on detection of mental illness and have evolved to develop value through minimization of false positives based on high prevalence rates of mental illness in prison (Martin et al, 2016). Recent studies report the feasibility of screening for intellectual disabilities (Board, Ali & Bartlett, 2015).

A potential starting point for effective screening in a prison setting could be literacy-based. Irish studies have found poor literacy rates in the prison population: Wright et al (2006) found that 12% of a cross sectional sample of female Irish prisoners attended special school or remedial classes in mainstream school. Duffy, Linehan and Kennedy (2006) found that amongst male sentenced Irish prisoners, 47 out of 436 (10.8%) reported having no literacy skills whilst 82 out of 438 (18.7%) reported having attended a special school (including schools for those with behavioural problems) or had remedial classes within a mainstream school. However, using literacy as a sole measure to screen for intellectual disabilities would be confounded by specific learning difficulties as well as demographics such as social deprivation.

Several screening tools have been cited in relation to the screening of intellectual disabilities in prison populations (Hayes, 2002; Paxton & McKenzie, 2006). These have included the The Kaufman Brief Intelligence Test (KBIT), the Vineland Adaptive Behaviour Scales (VABS), the Hayes Ability Screening Index (HASI) and the Learning Disability Screening Questionnaire (LDSQ).

The LDSQ has been validated in a UK sample (McKenzie, Sharples & Murray, 2015). It is a 7-item scale and does not require the assessor to have qualifications or training. It has



sensitivity of 91% and specificity of 87%, based on a community sample (Paxton et al., 2008); it has a lower sensitivity and higher specificity in forensic populations but has demonstrated discriminative validity (McKenzie et al., 2012). No tool, however, has been validated specifically in an Irish setting, and this may be a further research consideration.

As with any screen, the burden of a false positive and false negative need to be considered. A false positive to a screening test for intellectual disabilities would lead to a comprehensive assessment but also potential stigmatisation. A false negative, however, would potentially leave the individual without access to a care pathway.

Screening would only be meaningful if, firstly, there were resources to conduct a comprehensive follow on assessment and, secondly, if there was a care pathway in place to assist prisoners with intellectual disabilities. For remand prisoners, this would mean access to a timely comprehensive assessment and court diversion service but also access to specialist hospital beds and residential spaces. For sentenced prisoners, this would mean access to specialist treatment, such as adapted sexual offender treatment programmes or violence reduction programmes and specialised rehabilitation (UNODC, 2009). However, even without such pathways, identification of those with intellectual disabilities would be advantageous as offenders with an intellectual disability are associated with elevated suicide rates in prison (Fazel, Xenitidis, & Powell, 2008) and are at risk of victimisation (Talbot, 2008), often requiring housing on vulnerable prisoner wings.

In summary, our findings indicate a need for further research to ensure that those with intellectual disabilities in Irish prisons have, as per prior recommendations, their rights respected (Irish College of Psychiatrists, 2005).

**Bibliography**

**American Psychiatric Association** (2013). Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5). Washington, D.C: American Psychiatric Association. ISBN-13: 9780890425558

**Board,T., Ali,S., Bartlett, A.** (2015). Intellectual disability screening in women prisoners: preliminary evaluation. *International Journal of Prisoner Health*, 11 (4), 243-254.

**Bronson, J. & Berzofsky, M.** (2015). Disabilities Among Prison and Jail Inmates, 2011–12. U.S. Department of Justice: Bureau of Justice Statistics. Retrieved from: <https://www.bjs.gov/content/pub/pdf/dpji1112.pdf>

**British Psychological Society** (2015). Guidance on the Assessment and Diagnosis of Intellectual Disabilities in Adulthood. Leicester: British Psychological Society.

**Doyle, A. & Carew, A.M.** (2016) Annual Report of the National Intellectual Disability Database Committee 2015 Main Findings. HRB Statistics Series 30. Dublin: Health Research Board.

**Duffy, D., Lenihan, S., Kennedy, H.** (2003). Screening prisoners for mental disorders. *Psychiatric Bulletin*, 27:241-242.

**Duffy, D. M., Linehan, S. A., Kennedy, H. G.** (2006). Psychiatric Morbidity in the male sentenced Irish Prisons Population. *Irish Journal of Psychological Medicine*, 23(2); 54-62

**Giblin, Y., Kelly, A., Kelly, E., Kennedy, H.G., Mohan, D.** (2012). Reducing the use of seclusion for mental disorder in a prison: implementing a high support unit in a prison using participant action research. *International Journal of Mental Health Systems*, 6(1), 2. <http://doi.org/10.1186/1752-4458-6-2>

**Hassiotis, A., Gazizova, D., Akinlonu, L., Bebbington, P., Meltzer, H., Strydom, A.** (2011) Psychiatric morbidity in prisoners with intellectual disabilities: analysis of prison survey data for England and Wales. *The British Journal of Psychiatry*, 199 (2), 156-157; DOI: 10.1192/bjp.bp.110.088039

**Hellenbach, M., Karatzias, T. and Brown, M.** (2017), Intellectual Disabilities Among Prisoners: Prevalence and Mental and Physical Health Comorbidities. *Journal of Applied Research in Intellectual Disabilities*, 30: 230–241. doi:10.1111/jar.12234

**Fazel, S., Xenitidis, K., Powell, J.** (2008). The prevalence of intellectual disabilities among 12000 prisoners — A systematic review. *International Journal of Law and Psychiatry*, 31(4), 369–373. <http://doi.org/10.1016/j.ijlp.2008.06.001>

**Hayes, S.C.** (2002). Early intervention or early incarceration? Using a screening test for intellectual disability in the criminal justice system. *Journal of Applied Research in Intellectual Disabilities*, 15, 120–128.

**Irish College of Psychiatrists.** (2005) *People with a learning disability who offend: forgiven*

but forgotten? Dublin: Irish College of Psychiatrists. Retrieved from [http://www.irishpsychiatry.ie/Libraries/External\\_Affairs/People\\_with\\_a\\_Learning\\_Disability\\_who\\_Offend\\_Forgiven\\_but\\_Forgotten.sflb.ashx](http://www.irishpsychiatry.ie/Libraries/External_Affairs/People_with_a_Learning_Disability_who_Offend_Forgiven_but_Forgotten.sflb.ashx)

**Jastak, S. & Wilkinson, G.** (1984). The Wide Range Achievement Test: Manual of instructions. Wilmington, DE: Jastak Associates. (1984)

**Kaufman, A.S., & Kaufman, N.L.** (2004). Kaufman Brief Intelligence Test, Second Edition. Bloomington, MN: Pearson, Inc.

**Kennelly, B., O'Shea, E.** (2008). The Economics of Mental Health Care in Ireland. Retrieved from <http://www.mhcirl.ie/File/ecommmhceire.pdf>

**Leonard, P., Morrison, A., Delany-Warner, M., & Calvert, G.J.** (2015). A national survey of offending behaviour amongst intellectually disabled users of mental health services in Ireland. *Irish Journal of Psychological Medicine*, 1–9. <http://doi.org/10.1017/ipm.2015.21>

**Linehan, S., Duffy, D., O'Neill, H., O'Neill, C., Kennedy, H. G.** (2002). Irish Travellers and forensic mental health. *Irish Journal of Psychological Medicine*, 19(03), 76–79. <http://doi.org/10.1017/s0790966700007102>

**Lenihan, S. A., Duffy, D. M., Wright, B., Curtin, K., Monks, S., Kennedy H.G.** (2005). Psychiatric morbidity in a cross-sectional sample of male remanded prisoners. *Irish Journal of Psychological Medicine*, 22(4), 128-132

**Martin, M.S., Potter, B.K., Crocker, A.G., Wells, G.A., Colman, I.** (2016). Yield and Efficiency of Mental Health Screening: A Comparison of Screening Protocols at Intake to Prison. *PLoS ONE*, 11(5): e0154106. <https://doi.org/10.1371/journal.pone.0154106>

**McKenzie, K. & Paxton, D.** (2006). Promoting access to services: the development of a new screening tool. *Learning Disability Practice*, 9(6), 17-21.

**McKenzie, K., Michie, A., Murray, A.L. and Hales, C.** (2012). Screening for offenders with an intellectual disability: the validity of the Learning Disability Screening Questionnaire. *Research in Developmental Disabilities*, 33, 791-795.

**McKenzie, K., Sharples, P. and Murray, A.L.** (2015) Validating the Learning Disability Screening Questionnaire Against the Weschler Adult Intelligence Scale, Fourth Edition. *Intellectual and Developmental Disabilities*, 53, 301-307.

**Murphy, M., Harrold, M., Carey, S., Mulrooney, M.** (2000). A Survey of the Level of Learning Disability among the Prison Population in Ireland . Retrieved from [http://www.iprt.ie/files/learning\\_disability\\_report.pdf](http://www.iprt.ie/files/learning_disability_report.pdf) (accessed 14 November, 2016)

**O'Connor, A., O'Neill, H.** (1990). Male prison transfers to the Central Mental Hospital, a special hospital (1983–1988). *Irish Journal of Psychological Medicine*, 7 (2), 118-120. <https://doi.org/10.1017/S0790966700016645>

**O'Neill, C., Smith, D., Caddow, M., Duffy, F., Hickey, P., Fitzpatrick, M., Cadow, F., Cronin, T., Joynt, M., Azvee, Z., Gallagher, B., Kehoe, C., Maddock, C., O'Keeffe, B., Brennan, L., Davoren, M., Owens, E., Mullaney, R., Keevens, L., Maher, R., Kennedy,**

**H. G.** (2016). STRESS-testing clinical activity and outcomes for a combined prison in-reach and court liaison service: a 3-year observational study of 6177 consecutive male remands. *International Journal of Mental Health Systems*, 10(1), 956. <http://doi.org/10.1186/s13033-016-0097-z>

**Paxton, D., McKenzie, K. & Murray, G.C.** (2008). Putting screening tools to the test. *Learning Disability Practice*, 11 (8), 14-18.

**Simpson, M. K, Hogg, J.** (2001). Patterns of offending among people with intellectual disability: a systematic review. Part I: methodology and prevalence data. *Journal of Intellectual Disability Research*, 45(5), 384–396. <http://doi.org/10.1046/j.1365-2788.2001.00345.x>

**Søndena, E., Rasmussen, K., Palmstierna, T. and Nøttestad, J.** (2008), The prevalence and nature of intellectual disability in Norwegian prisons. *Journal of Intellectual Disability Research*, 52, 1129–1137. doi:10.1111/j.1365-2788.2008.01072.x

**Smith, T., Followay, E.A., Patton, J.R. & Beyer, J.F.** (2008). Individuals with Intellectual and Developmental Disabilities in the Criminal Justice System and Implications for Transition Planning. *Education and Training in Developmental Disabilities*, 2008, 43(4), 421–430.

**Talbot, J.** (2008) No-one knows. London: Prison Reform Trust

**Tort, V., Dueñas, R., Vicens, E., Zabala, C., Martínez, M., Romero, D.M.** (2016) Intellectual disability and the prison setting. *Rev Esp Sanid Penit*, 18(1), 25-32.

doi:10.4321/S1575-06202016000100004.

**United Nations Office on Drugs and Organised Crime** (2009). Handbook on prisoners with special needs, Criminal Justice Handbooks Series: Vienna. Accessed at [https://www.unodc.org/pdf/criminal\\_justice/Handbook\\_on\\_Prisoners\\_with\\_Special\\_Needs.pdf](https://www.unodc.org/pdf/criminal_justice/Handbook_on_Prisoners_with_Special_Needs.pdf)

**Wright, B., Duffy, D., Curtin, K., Linehan, S., Monks, S., Kennedy, H. G.** (2006). Psychiatric Morbidity Among Women Prisoners Newly Committed and amongst Remanded and Sentenced Women in the Irish Prison System *Irish Journal of Psychological Medicine*, 23(2); 47-53.

**Wechsler, D.** (1981). WAIS-R: Wechsler adult intelligence scale-revised. New York: Psychological Corporation.

**World Health Organization.** (1992). The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines. Geneva: World Health Organization.